

THREE NEW LAND SNAILS FROM EASTERN UNITED STATES

By LESLIE HUBRIGHT

PALLIFERA MUTABILIS, new species.

Very young with a dark gray band on each side, connected to a dorsal band by a series of oblique stripes on a light background. With age the markings become browner, the dorsal band disappears, and the oblique stripes break up into a series of spots. Adults have a fine brownish flecking on a pale buffy background with scattered dark gray-brown spots, remnants of the oblique stripes; a band on each side, the upper margin of which is sharp but irregular, the lower margin indistinct, fading gradually into the general background color. The margin of the foot is olive-gray.

Size large, reaching a length of 100 mm. or more when fully extended in crawling, but usually somewhat smaller, the holotype being 62 mm. long preserved in alcohol.

Jaw arcuate, cutting edge with a median projection, usually smooth in the middle, with from five to eight ribs on each side.

The penis is shaped much as in *P. dorsalis* but contains seven longitudinal papillose ridges. The anterior half of the spermathecal duct is much enlarged, being larger than either the penis or oviduct, and contains seven non-papillose longitudinal ridges.

Pallifera mutabilis is related to *P. wetherbyi* W. G. Binney which it resembles in its large size, and in the jaw. It differs markedly in color pattern. In *P. wetherbyi* there are no lateral bands, the oblique stripes are fewer in number, broader, and darker, and do not break up into spots with age.

Type Locality.—Upland oak woods, just west of Schoolfield, Pittsylvania Co., Virginia. Holotype 187104, A.N.S.P., paratypes in the collection of the author.

Distribution.—MARYLAND: Cecil Co.: woods, 0.5 miles west of Rising Sun. VIRGINIA: Nansemond Co.; Dismal Co.; Dismal Swamp, 2 miles southeast of Suffolk; just east of Suffolk. Mecklenburg Co.: bluffs of Dan River, at US-1. Halifax Co.: Staunton River Bluff, Staunton River State Park; upland woods, 2 miles northwest of Omega. Campbell Co.: near river, Alta-vista. Pittsylvania Co.: bluff along Banister River, 1.5 miles northwest of Riceville; roadside, US-58, north of Danville; 2 miles northeast of Bachelors Hall; bluff along Staunton River, 5 miles north of Sandy level; woods, just west of Schoolfield. Allegheny Co.: wooded hillside, near Griffith, 6 miles northeast

of Clifton Forge; 2 miles southwest of Lowmoor. Montgomery Co.: Tyler Ridge, Radford. NORTH CAROLINA: Bertie Co.: waste ground, Windsor. Edgecombe Co.: 2 miles northwest of Pine Top. Greene Co.: 7 miles northwest of Snow Hill. Martin Co.: near Sweet Water Creek, 1.3 miles southeast of Williamston. Lenoir Co.: swamp, 6 miles south of Woodington. Bladen Co.: near White Oak; Cape Fear River bluff, Elizabethtown. Brunswick Co.: vacant lot, Southport; Wet Ash Swamp, 2 miles southeast of Ash. Rockingham Co.: upland oak woods, 5 miles east of Draper. Swain Co.: near Smokemont Camp Grounds, Great Smoky Mountains National Park. SOUTH CAROLINA: Darlington Co.: waste ground, Society Hill. WEST VIRGINIA: Fayette Co.: near New River, 1 mile southeast of Gauley Bridge. TENNESSEE: Campbell Co.: cedar glade near mouth of Doakes Creek, 10 miles northeast of LaFollette. Carter Co.: Doe River bluff, 1 mile northwest of Hampton. Anderson Co.: Clinch River bluff, 4 miles southwest of Clinton. Sevier Co.: headquarters, Great Smoky Mountain National Park, 4 miles south of Gatlinburg. Marion Co.: near large spring, 2 miles northeast of Sequatchie. ILLINOIS: Union Co.: Fountain Bluff. 1 mile south of Gorham; 3.5 miles southwest of Ava. MISSOURI: St. Louis Co.: Rockwoods Reservation; Fox Creek Gap, 1 mile west of Allenton; 4.5 miles east of Eureka; Musicks Ferry; 1 mile southeast of Valley Park; Creve Coeur Lake Park; Osage Hills, Kirkwood. Jefferson Co.: bluffs along Rock Creek, 0.5 mile southeast of Seckman; mouth of small cave on hillside, 0.5 mile south of Rush Tower. Franklin Co.: 1 mile southwest of Port Royal; bluff along Meramec River, 2 miles south of Gray Summit. Boone Co.: bluff along Brush Creek, 4 miles southeast of Ashland. Camden Co.: Hahatonka. Miller Co.: Osage River bluff, east of Brumley.

PUNCTUM (PSEUDOPUNCTUM) LAMELLATUM, new species.

Shell minute, pale brown to vitreous, translucent, depressed conoid, whorls 3.5 to 4, slightly oval in cross-section. Umbilicate, the umbilicus contained 3 to 3.5 times in diameter of shell. Aperture wider than high. Major growth riblets not prominent, the interspaces with 1 to 3 minor growth ridges. Spiral striae very weak, requiring a magnification of 150 \times to make them visible. Base of the body whorl of mature shells armed with a low lamella which is a half whorl long. Immature shells without a lamella.

Punctum lamellatum is closely related to *P. smithi*, with which it was found, and which it resembles in shape and sculpture. It differs in being lighter colored, and in having a much longer and more slender lamella.

Height 0.7 mm. Diam. 1.2 mm. Diam. of umbilicus 0.4 mm. Holotype.

Localities.—VIRGINIA: Bedford Co.: among leaves, summit of Smith Mountain, 20 miles south of Bedford. Holotype 187103, A.N.S.P., paratypes in the collection of the author. Pittsylvania Co.: bluff along Staunton River, 3 miles northwest of Brights; woods, just west of Schoolfield.

CARYCHIUM COSTATUM, new species.

Because there is nothing in Dr. H. A. Pilsbry's description of *C. exile* (Land Mollusca of North America, p. 1158) which would not also fit this new species it seems best to describe it by a comparison with that species.

Differs from *Carychium exile* H. C. Lea in being larger, whiter, the rib striae are higher, tending to be bluntly angular rather than rounded, and extend higher up the shell. The lip does not have the heavy thickening usually found in *exile*. The internal lamella is similar but the margin is more sinuous.

Height 1.9 mm. Diam. 0.8 mm. Ht. Ap. 0.7 mm. Holotype.

Height 1.85 mm. Diam. 9.7 mm. Ht. Ap. 0.6 mm. Radford.

Height 1.9 mm. Diam. 0.75 mm. Ht. Ap. 0.7 mm. Kibler Park.

Distribution.—WEST VIRGINIA: Fayette Co.: below Cane Branch Falls, 1.3 miles southeast of Gauley Bridge, Type 187102, A.N.S.P., paratypes in the collection of the author. VIRGINIA: Pulaski Co.: ravine, opposite Radford. Patrick Co.: ravine, near Kibler Park, below Pinnacles Power House. Washington Co.: Laurel thicket, base of Laurel Mtn., 4 miles southwest of Konnarock; 1 mile south of Damascus. Pittsylvania Co.: bluffs along Staunton River, 3 miles northwest of Brights. NORTH CAROLINA: Macon Co.: Wallace Gap, Nantahala Mtn., 2 miles east of Slagle.

At the type locality this species was found associated with *C. exile* from which it differed enough so that the two species could be separated with the unaided eye. Most lots of *exile* show a noticeable variation in proportions between individuals. In this species the individuals of each lot are remarkably uniform.

A REPORT ON LAND SNAILS OF THE JACKSON HOLE REGION, WYOMING

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This paper is a short report on the land snails found in the Jackson Hole Region and Teton Mountains in northwestern Wyoming during a month's stay at the Jackson Hole Research Laboratory of the New York Zoological Society. The collection of snails was part of a study of the invertebrate fauna of this region, carried out between July 15 and August 15, 1950. Henderson's (1933, 1936) records for this region are included in our list.

The authors want to thank Dr. H. A. Pilsbry and Mr. C. Wurtz for help in identification of some of the more difficult snails, Mrs. D. Beetle of Laramie, Wyoming, for her records of some snails of this region, and Dr. D. Lowrie for his contributions to our collection.

LAND SNAILS KNOWN FROM JACKSON HOLE REGION

Family Camaenidae

Oreohelix subrudis ("Pfeiffer," Reeve) ²

Oreohelix strigosa depressa (Cockerell) ³

Family Sagdidae

Microphysula ingersolli (Bld.) ³

Family Zonitidae

Euconulus fulvus alaskensis (Pilsbry) ²

Retinella electrina (Gould)

Zonitoides arboreus (Say) ²

Vitrina alaskana Dall ²

Family Limacidae

Deroceras laeve (Müll.)

¹ Supported in part by a grant from The New York Zoological Society.

² Henderson's (1936) records verified.

³ Listed by Henderson (1936) only.

Family Endodontidae

Discus cronkhitei (Newcomb) ²

Discus shimcki shimcki (Pilsbry) ³

Discus shimcki cockerelli Pilsbry

Punctum minutissimum (Lea) ²

Family Succinidae

Succinea avara (Say) ²

“*Succinea retusa* Lea” ³

Family Pupillidae

Pupilla blandi Morse ³

Pupilla muscorum (Linn.)

Vertigo concinnula Cockerell

Family Valloniidae

Vallonia cyclophorella Sterki ²

Zoogenetes harpa (Say)

Spruce-fir Forest

Cascade Canyon, Grand Teton National Park. Near a small stream at the northwest end of Jenny Lake (elev. 6779 ft.), a single specimen of *Oreohelix subrudis* was found. The ground cover at this place was thimble berry (*Rubus* sp.). The trees were Engelmann spruce and alpine fir. Mrs. D. Beetle reports (personal communication) *Zonitoides arboreus*, *Vitrina alaskana*, and *Pupilla muscorum* from Cascade Canyon.

Death Canyon, Grand Teton National Park. Under logs on the humid canyon floor were found *Oreohelix subrudis* and *Vitrina alaskana*. The trees were Engelmann spruce and alpine fir. The ground beneath them was bare of herbaceous plants.

Pilgrim Creek, South of U. S. highway 287, Jackson Hole National Monument. Along the creek at this point the forest was mainly Engelmann spruce and alpine fir, but Colorado blue spruce and narrowleaf cottonwood were also present. *Euconulus fulvus alaskensis*, *Zonitoides arboreus*, *Vitrina alaskana*, *Discus cronkhitei*, *Vertigo concinnula*, and *Vallonia cyclophorella* were collected there.